

Regulation of Indian Debt & Derivatives Markets: Some perspectives on post-crisis paradigm¹

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I. Why do we need regulation?

I.I Importance of regulation for markets

2. Wayne Byres, Secretary General, Basel Committee on Banking Supervision (BCBS) described financial market participants as 'glass half full' people, and regulators as their 'glass half empty' counterparts. The reason for such description is that market participants will first see opportunity for reward whereas regulators will first see exposure to risk. The two perspectives are different sides of the same coin and are essential for development of financial markets and, by extension, development of the real economy. The operation of an efficient financial sector is dependent on efficient financial regulation. The recent financial crisis has amply demonstrated the need for effective regulation.

3. The financial crisis has been triggered by actions of financial firms motivated by incentives which were misaligned with the requirements of financial stability. The regulators were not able to accurately gauge the impact of the actions of financial firms, whether they are sub-prime lenders or dealers in complex derivatives, leading to a crisis of humongous magnitude. The "free markets paradigm", which emphasized the efficiency and self-correcting nature of markets, has been found inadequate. The build-up of systemic vulnerabilities arising from excess liquidity, leverage, risk-taking and interconnectedness across the financial system was not detected by regulators. The crisis has in a sense changed the global regulatory landscape dramatically.

4. Besides taking monetary and fiscal steps intended to restore market confidence and help economic recovery from the crisis, the policy makers have also shown

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determination to introduce new financial regulations in an attempt to mitigate the impact of such crisis in future. The regulatory reform is therefore focused on strengthening micro-prudential and market-conduct regulation supplemented with focus on build-up of systemic risks.

5. As the crisis spread to the developed countries, interconnectedness of global finance highlighted need for coordination of regulation at the global level, prompting G-20 countries to launch a coordinated and concerted regulatory reform initiative. G-20 also emphasized on effective enforcement of regulation which should be coordinated internationally so that national authorities and international standard setters work together and assist each other in strengthening financial regulatory and oversight frameworks. G-20 has recognised that regulatory reform requires enhancements to a range of supporting policies and infrastructure, including compensation practices that promote prudent risk taking; the greater standardization of derivatives contracts and the use of risk-proofed central counterparties (CCPs); improved accounting standards that better recognize loan-loss provisions and dampen adverse dynamics associated with fair-value accounting. At the global level, strict new rules on capital, liquidity and leverage have been designed so as to ensure that there are sizable buffers available in the system as cushion against event of failure and the risks assumed by the financial firms are limited.

6. In the advanced economies, comprehensive regulatory reforms have been ushered in key areas through legislation (e.g. passage of Dodd-Frank Act in US) and comprehensive review (e.g. Vickers review of banking system in United Kingdom). The global scale of crisis and the complex financial system with entities straddling across national jurisdictions necessitated coordinated regulatory action through international agencies, and the G20 has therefore taken an enhanced role in shaping international financial regulatory arrangements.

I.II Global Initiatives on Regulation

7. The new regulatory initiatives are intended to be both more intrusive in their impact on the financial sector than the “*light touch*” approach to regulation and supervision that prevailed – particularly in some jurisdictions – before the crisis, and they are also designed to be much broader in scope. They cover not only capital and liquidity required by financial institutions (e.g. Basel III), but also market activities, financial instruments, infrastructure, and benchmarks [e.g. Markets in Financial Instruments Directive (MiFID-II), Markets in Financial Instruments Regulation (MiFIR), European Market Infrastructure Regulation (EMIR), European Commission’s proposed Regulation on indices used as benchmarks in financial instruments and financial contracts]. The cost to the industry for complying with these new regulations is certain to be high, but it is outweighed by the potential benefit of a stable financial system.

I.III Financial Market Regulation – The Indian Perspective

8. Reserve Bank of India is the regulator of Money, G-Sec and OTC credit, foreign exchange and interest rate derivatives including Repo. In pursuit of the regulatory mandate, the Reserve Bank has been endeavouring to develop broad and deep markets. Deeper and broader financial markets serve important public policy objectives in terms of

improving the efficiency of capital allocation and absorbing the risks entailed in financing growth. As sound regulation is an essential institutional factor to ensure market development, Reserve Bank has been focussing on prudent regulations for furthering the development of Money, G-Sec and OTC derivatives markets. Reforms in the G-Sec market carried out since the early 90s have ensured that the G-Sec market is a well-organized and regulated market with world class market infrastructure for trading and settlement.

9. Reserve Bank of India's approach to regulation and development of the financial markets has been guided by three broad principles.

- i. First, the menu of financial products available to enable economic agents to hedge emergent risks and meet their funding requirements should be widened.
- ii. Second, the introduction of new products should follow a graduated process guided by the acceptance of the product by market participants.
- iii. Lastly, the robustness of the market infrastructure for trading, settlement and reporting of existing as well as new financial products should be improved.

From the outset, India has resolved to attain standards of international best practice but the endeavour has been to fine tune the process keeping in view the underlying structural, institutional and operational issues.

10. The philosophy behind such policy action is preference for safety and stability of the financial system over the considerations of short term market activity. This was well articulated by Governor Dr. Raghuram Rajan that Reserve Bank of India's policy focus is to broaden and deepen financial markets and increase their liquidity and resilience so that they can help allocate and absorb the risks entailed in financing India's growth. Efforts of Reserve Bank has been to strike a balance between market development and financial stability.

11. We can describe our regulatory and developmental measures for the debt and derivatives markets under two broad focus areas – building resilience and increasing liquidity.

II. Building Resilience of Debt & Derivatives Markets

12. Safe and sound markets ensure financial stability and orderly market development. The resilience of financial markets is ensured by the Reserve Bank of India mandating requirements for registration and reporting, requirements for capital and collateral and orderly market rules.

II.1 Requirements for registration & reporting

13. The requirements of registration ensure that safe and financially strong entities have access to the financial system. For instance, Reserve Bank's guidelines for authorization of Primary Dealers (PDs) prescribe that besides financials, experience in the financial sector and commitment to serve the market including retail/mid-segment participants are required for becoming a PD. The reporting requirements foster transparency, market integrity as well as discipline. Lack of transparency has often been cited as a major reason for global financial crisis. In India, Reserve Bank has taken

several steps to improve transparency through mandated reporting requirements. G-Sec trades are captured by the anonymous trading platform owned by the Reserve Bank [Negotiated Dealing System- Order Matching (NDS-OM)]. All OTC outright and repo transactions in G-sec and Call/Notice/Term money transactions are reported to CCIL. Commercial Paper/Certificate of Deposit trades are reported on FIMMDA's reporting platform. Comprehensive OTC Derivative trade reporting is in place.

II.II *Requirements for capital and collateral*

14. Requirements of capital and collateral are prudential in nature and ensure that the market participants do not take undue counterparty risks while trading in the market. Capital requirements act as buffer against various risks including credit and market risks. Indian banks have been well capitalised and have been conforming to the international best practices with regard to bank capital as delineated by the Basel prescriptions. We have announced migration to Basel III to strengthen the banks' capital base and improve their ability to withstand systemic shocks. The norms would come into effect in a phased manner. We are in the process of revamping capital adequacy standards of standalone primary dealers on lines of Basel III framework. Collateral requirements reduce counterparty risk in market transactions. The international consensus on sound regulation for OTC derivatives as articulated by G20 declaration for moving these derivatives to central clearing and mandatory posting of margins emphasizes the importance attached to collateral. In India collateral protocols are available for G-sec, repo and equity markets. We are in the process of operationalising similar dispensation in OTC derivatives markets.

II.III *Orderly market rules*

15. In order to protect the integrity of market prices so that they provide credible price information and encourage wider market participation, orderly market rules are put in place by the regulators. These rules need not necessarily be prescribed by the regulator itself rather they could evolve through consensus among market participants. FIMMDA's Code of Conduct is an example in this regard. FIMMDA has also constituted a Dispute Resolution Committee recently with wider representation of varied market participants to resolve the disputes arising out of erroneous trades in the government securities market. Wherever gaps are seen, the market regulator steps in to ensure orderly conduct. Financial stability concerns have been the prime motive behind such actions. Rules prescribed by the Reserve Bank, such as, the users of CDS to buy them only with underlying exposure; placing appropriate limits on short selling; ensuring consumer protection by measures that would curb mis-selling with emphasis on "appropriateness & suitability"; placing appropriate limits on interest rate futures positions, etc. must be seen in this perspective. One can say that the approach has served Indian financial markets well as India was relatively unscathed from the contagion effects of global financial crisis.

III. Enhancing liquidity in Debt & Derivatives Markets

16. Liquid debt markets are essential for both issuers and investors. In the recent years concerted efforts have been made to improve liquidity in debt markets. There have been regular issuances across yield curve, which spans up to 30 years, safe and efficient settlement system with world class infrastructure, a state of art trading system that

enables anonymous order matching and a liquid repo market that offers funding options. Hedging and trading instrument are available to enable market participants to freely express their views. Investor base of domestic and foreign investors is expanding and various instruments are being offered to cater to the needs of investors. Though liquidity has improved in G-sec market, the number of securities traded continues to be low. Liquidity is patchy and bonds are traded at a few points, especially at 10 year maturity. The concentration has increased during recent years even though issuances have been spread across the curve and critical mass required for liquidity is built through re-issuances. Liquidity remains a function of bear and bull phases and we see exuberance during bull runs and freezes during a bear phase. We have seen volumes touching over ₹ one lakh crore and plummeting to ₹10,000-15,000 crore.

17. In the recent period, implementing recommendations of the the Working Group on Enhancing Liquidity in the Government Securities and Interest Rate Derivatives Markets (Chairman: Shri R. Gandhi) (Gandhi Working Group) has been the priority of the Reserve Bank. Action has been initiated/completed in nearly 70% of the recommendations. The recommendations, such as, truncating the time window for bidding in the primary auction; changing the settlement cycle of primary auctions in Treasury Bills (T-Bills) from T+2 to T+1; conduct of primary auctions in G-Sec as a mix of both uniform-price and multiple price formats and re-issuances of existing securities in state development loans; standardizing interest rate swap (IRS) contracts to facilitate centralized clearing and settlement of these contracts; and migration of secondary market reporting of over-the-counter (OTC) trades in G-Sec (outright and repo) from PDO-NDS to NDS-OM and CROMS, respectively, have been implemented.

18. Further measures include issuance of Inflation Indexed bonds for institutional as well as retail/ individual investors and, introduction of cash settled 10-year Interest Rate Futures. Steps towards active debt management have been taken by undertaking debt switch of securities from 2014-15 and 2015-16 maturity buckets for face value of about ₹ 27,000 crore to longer tenor security. All such initiatives have been taken after extensive market consultations and taking into account the feedback received.

19. It is our expectation that market participants would actively participate in the debt markets and improve liquidity. In this regard, I would discuss about two issues that would have a bearing on liquidity viz. market making and short selling.

III.I *Market making*

20. Primary Dealers are mandated to make markets in G-sec and provide liquidity. There is scope for improvement in market making efforts of PDs. Gandhi Working Group has recommended that one of the ways for improving liquidity is to consider allocating specific securities to each PD for market making in them and if required, rotate the stock of securities among the PDs, by turn, at periodic intervals. This would ensure continuous availability of prices for a select group of securities. Reserve Bank is in consultation with the PDAI and the Government to operationalise this recommendation. It is expected that vigorous efforts will be made by the PDs to provide two way quotes for sufficiently high number of securities to develop liquidity in the market. We plan to operationalise the market making scheme in the next fiscal and expect significant improvement in liquidity. In this context, the present annual minimum turnover ratios of 5 times for Government

dated securities and 10 times for T-Bills/CMBs of the average month-end stocks need to reviewed and suitably revised to a higher level.

III. II *Short selling*

21. The Reserve Bank has allowed short selling in G-sec to enable market participants to express interest rate views. Best practice in regulation demands that short selling should be subject to appropriate controls so as to reduce or minimise the potential risks that could affect the orderly and efficient functioning and stability of financial markets and be subject to a reporting regime that provides timely information to the regulators. Short selling was permitted in a sequential manner to enable market participants to take positions based on emergent interest rate scenarios and cap risks that could emanate from increased short selling. Intraday short selling in G-Sec was permitted in 2006; it was extended to five days in 2007 and then to three months in 2011. Participant-level quantitative limits (0.25 per cent and 0.50 per cent of the outstanding amount respectively for illiquid and liquid securities) have also been prescribed on the short positions to obviate risk of 'squeeze' in the securities and cap the overall risk in the market due to short selling. Appropriate reporting requirements have been prescribed to enable regulators to monitor the build-up of risks in the market. Some market participants expressed view that these regulations are limiting the freedom to express interest rate views and sought a much more liberal regime. The recent regulatory action on limiting short sale in American and European markets underscores the need for appropriate regulation of short selling. Reserve Bank is, however, constantly reviewing its policy and would consider further relaxations keeping in view the needs of market participants and imperatives of financial stability.

22. In the context of liquidity, I would like to make a broader point which market bodies like FIMMDA & the market participants need to ponder over. Liquidity, like many other market concepts, is a self-fulfilling one. An instrument is as liquid as the participants believe it to be. If more participants believe that an instrument is liquid and evince buying interest, it "becomes" liquid. While the product design, trading systems, regulatory dispensations, etc. do have an impact on the liquidity of an instrument, more importantly, it is the activity by the participants that makes the instrument liquid. All it requires is a few participants taking the first step. While we have certain market segments which boast of sizeable trading volume and wider participation, there is a significant skewness in other market segments. It is everybody's interest that we make the markets broad and deep. Just to remind - it is the market-participants that make markets and regulators can only play a facilitator's role.

IV. Recent measures

23. I would briefly summarize recent developments with regard to G-Sec, Corporate Bond, money and derivatives markets.

IV. I *Interest Rate Futures*

24. As announced in the Second Quarter Review of Monetary Policy 2013-14, the Reserve Bank permitted cash settled Interest Rate Futures (IRF) on 10-year Government of India security after extensive consultations with stakeholders. The IRF is unique in

design as settlement price is based on a single benchmark bond. The instrument is currently trading on three exchanges. The trading volume, which was very encouraging on the first few days of the introduction, has tapered thereafter. The participation is also subdued as many of the banks are yet to start using the product. The product helps in better management of interest rate risks and market participants can make use of the same. Going forward, based on the experience gained and assessment of the market demand, we can consider similar cash settled interest rate futures on benchmark securities, money market futures, etc.

IV.II *Term Repo*

25. Reserve Bank introduced variable rate term repo facility in October 2013 to provide market participants with additional access to primary liquidity as well as impart greater flexibility in managing their reserve requirements. The reduced reliance on overnight funds by the banks would hopefully encourage them to actively transact in the term money market, paving the way for development of a liquid term money market. The term repo is now available up to 28 day tenor. Keeping in view the overall liquidity conditions in the banking system, going forward, Reserve Bank may appropriately extend the tenor and nature of term repos.

IV.III *CD-CP Markets*

26. Reserve Bank of India has introduced DvP-I based settlement of all OTC transactions in Certificates of Deposit (CDs) and Commercial Papers (CPs) on the lines of the arrangement already existing in case of settlement of OTC trades in corporate bonds to eliminate the settlement risk. Guidelines on CPs have been comprehensively reviewed. Changes introduced includes changing minimum rating requirement for CP issuance to A3, allowing buy-back of CP through the secondary market and at prevailing market price, etc. With regard to CDs, I would like to mention a rather disturbing phenomenon, which I would term as "March Rush". It has been observed for some time that banks raise deposits at exorbitant cost to inflate balance sheets. While this may spruce up appearance of bank's financials, it would have a deleterious impact on money market rates, creating avoidable stress. I suggest that FIMMDA may engage with banks and take steps to avoid such stress.

IV.IV *Repo in Corporate Debt*

27. To widen the participant base in corporate bond repo market, Scheduled Urban Cooperative banks have been permitted to participate in the instrument. To encourage activity in corporate bond repo, eligible category of collateral has been expanded to include short term instruments like CPs, CDs and NCDs and minimum haircut requirement has been further reduced. There is, however, no activity in the corporate bond repo markets. Progress in signing Global Market Repo Agreement (GMRA) is slow. I request FIMMDA to advise its members to sign GMRA to enable trading in corporate bond repo. In case the progress continues to be slow, Reserve Bank would examine the option of mandating signing of GMRA as a market development measure.

V. Emerging issues

28. I would like to share my thoughts on some of the emerging issues that require deeper deliberations as this is the right forum to exercise our minds on these issues as they are likely to have financial system wide impact. It could be very informative to have the market participants' views on these issues. The issues include enhancing investment limit for foreigners in our debt markets, debate over appropriate benchmarks and their regulation, issues emerging out of G-20 declaration on OTC derivatives, legal issues relating to bilateral netting, and extraterritorial application of certain laws enacted in developed countries.

V.I *Enhancing foreign investment limits in G-Sec and corporate bonds*

29. Pursuing our policy of enhancing foreign investment in domestic financial markets in a calibrated and gradual manner, the total limit for foreign investment in Government Securities has been increased over a period of time to the current limit of USD 30 billion. While being sensitive to the demand for opening markets to foreign investors, the risk-reward trade off needs to be carefully examined. The imperatives of widening and diversifying investor base leading to higher demands for debt instruments need to be kept in view along with the considerations about financial stability and insulation from sudden-stop risks. Going forward our focus would be on encouraging participation of long term investors in our debt markets and reducing the availability of short-term debt instruments for foreign investors who often act as "investment tourists", particularly during period of stress.

V.II *Financial Benchmarks*

30. The benchmark rates/indices in the financial markets are in the nature of "public goods". They serve as common reference points for pricing of financial instruments. Any attempted manipulation of the benchmarks not only erodes their credibility but also poses serious threat to stability of the financial system as large volume of financial contracts are referenced to the widely used benchmarks. The benchmark rate setting process, therefore, has to be robust with strong governance standards for maintaining the credibility and reliability of the benchmarks. The recent scandals relating to manipulation of several key global benchmarks, viz. LIBOR, EURIBOR, TIBOR, London 4 PM FX fixing, etc., have severely impaired the trust of the international community on the financial benchmarks. Regulators and public authorities in several jurisdictions have conducted wide ranging probes involving many major benchmarks and have penalised several banks and brokerage firms for their misconduct. The probes are still on.

31. Meanwhile, various international standard setting bodies, central banks and market regulators have undertaken comprehensive review of the existing benchmark setting system and recommended several reform measures for restoring the credibility of the financial benchmarks. Such reform measures have been undertaken/underway in many jurisdictions. To mention a few major ones; the LIBOR has been notified as a regulated activity under FSMA (Financial Services and Markets Act 2000) since April 2, 2013 with provisions for criminal sanctions for manipulation of the benchmark. The administration of LIBOR has recently been transferred to the Intercontinental Exchange Group (ICE) Benchmark Administration Limited. The European Commission has issued the draft legislation for regulation of financial benchmarks in the Euro region. The Administrator of EURIBOR, viz. EURIBOR-European Banking Federation, has taken

several measures to strengthen the governance framework including reducing the representation of the panel banks in the steering committee to minority. The Japanese Banking Association, the administrator of TIBOR, has announced forming a new entity for calculation and publication of TIBOR. The Monetary Authority of Singapore (MAS) has issued proposed regulations of the financial benchmarks containing stringent provisions, such as, licensing of administrators and submitters, designation of key benchmarks, criminal and civil sanction for benchmark manipulations, etc.

32. We have initiated similar action in India also. As you all know, the Reserve Bank of India's Committee on Financial Benchmarks (Chairman: Shri P Vijaya Bhaskar) (Vijaya Bhaskar Committee) have submitted its final Report recently. It has recommended several measures for strengthening the governance framework and setting methodology of major Indian Rupee interest rate and foreign exchange benchmarks. Although methodologies used for determination of major Indian benchmarks were found generally satisfactory by the Committee, it has recommended for bringing in several improvements on the lines of international developments. Wherever possible, the benchmark calculation is to be based on observable transactions subject to appropriate threshold. Overnight MIBOR fixing is to be shifted from the existing polling method to volume weighted average of call trades. On the governance of the benchmarks, the Committee has recommended several measures for strengthening the governance frameworks with the benchmark administrators, calculation agents as well as the submitters. Governance structure of FIMMDA and FEDAI with their Boards comprising directors from their member institutions could entail conflicts of interest in the context of benchmark settings. As recommended by the Committee, it would be appropriate for the FIMMDA and FEDAI to create a separate independent structure, either jointly or separately, for administration of the benchmarks. Further, I would like to urge FIMMDA and FEDAI to complete the reality self-check of their governance framework vis-à-vis the recommended principles within timeline of three months suggested by the Committee and inform the Reserve Bank for further consideration. They should also initiate necessary actions to strengthen the benchmark setting methodologies. I may also make a mention that it would be highly desirable to enforce some degree of supervisory oversight over the benchmarks as recommended by the Committee. Reserve Bank is currently examining the recommendations of the Committee for implementation.

V.III *Valuation of State Development Loans*

33. While on the subject of valuation and benchmarks, I would like to briefly discuss pricing and valuation of State Development Loans (SDLs). Historically, the SDLs are valued at 25 basis points over similar tenor Government of India security. This heuristic yardstick is not in line with best practice and Gandhi Working Group has recommended that the valuation methodology for SDLs may be reviewed. Subsequently, Vijaya Bhaskar Committee has reiterated the suggestion. While examination of these recommendations is underway and no policy decision is taken as yet, I would like to highlight that pricing of SDL by market participants does not seem to be in line with the nature of the instrument. How can one explain the pricing of SDL at spreads higher than those of highest rated corporate bonds when state governments are sovereigns and carry absolutely no default risk? SDLs are eligible investment for SLR requirement of the banks and carry Zero risk weight. Furthermore, SDLs are eligible investment for institutional investors, such as, insurance companies and pension funds as per the investment guidelines laid down by

their respective regulators. The states have initiated fiscal reforms and all of them have enacted fiscal responsibility legislation. Their fiscal health has been relatively better than the Central Government as States, at the aggregate level, have recorded revenue surplus. During 2012-13, twenty three states recorded revenue surplus. Reserve Bank of India is the banker and debt manager for the states. It has been taking steps to improve liquidity in SDLs by announcing quarterly indicative quantum, limited re-issuances, etc. SDLs have been made LAF/market repo eligible. In view of the above, it seems odd for the market to charge for large risk premium while pricing SDLs. The pricing anomaly needs to be looked at seriously. For market integrity, the price must reflect true value of the bond and valuation must reflect the market reality.

V.IV *OTC Derivatives Market Reforms*

34. In September 2009, G-20 leaders declared in Pittsburgh that all standardised OTC derivative contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties (CCPs) by end-2012 at the latest; OTC derivative contracts should be reported to trade repositories and non-centrally cleared contracts should be subject to higher capital requirements. In 2011, the G20 Leaders agreed to add margin requirements on non-centrally-cleared derivatives to the reform programme. Some progress has been achieved in accomplishment of regulatory reform. The Financial Stability Board (FSB) estimated that approximately 10 per cent of outstanding credit default swaps and approximately 40 per cent of outstanding interest rate derivatives were centrally cleared as of end-August 2012. It also estimated that well over 90 per cent of OTC interest rate and credit derivative contracts are being reported to Trade Repositories (TRs) whereas around 50 per cent of foreign exchange derivatives transactions are being reported to TRs.

35. India is committed to achieve the G-20 reform agenda for OTC derivatives. In order to guide the process of implementation of the key reform measures, an implementation group for OTC derivatives was constituted on the directions of the Sub Committee of the Financial Stability and Development Council (FSDC) with representatives from the Reserve Bank of India and market participants with Shri R. Gandhi, Executive Director, Reserve Bank of India as Chairman. The Implementation Group has submitted its report with a roadmap for implementation of reform measures with regard to OTC derivatives in India with timelines. We have made reasonable progress in implementation of G-20 recommendations in this regard and would work towards taking the process forward. Here, I would like to comment on a few major issues.

V.IV.I *Trade Reporting*

36. To ensure transparency in Interest Rate Swaps (IRS) trades, banks and PDs have been mandated to report the inter-bank/PD IRS trade data since August 2007. Forex forwards, swaps and options are mandatorily reported with phased roll-out of trade reporting since July 2012. The last phase was rolled out recently on December 30, 2013 mandating reporting of Inter-bank and client transactions in Currency Swaps, Inter-bank and client transactions in FCY FRA/IRS and Client transactions in INR FRA/IRS. CCIL has developed the confidentiality protocols for reporting of client transactions in consultation with FIMMDA and other market representative bodies. The reporting platform for Credit Default Swaps (CDS) was put in place from the date of introduction of

the instrument itself. Thus, in compliance with the G-20 commitments, trade reporting arrangement for various OTC interest rate, foreign exchange and credit derivatives have since been completed. Reserve Bank of India will periodically assess the extent of use of various OTC derivative instruments and will introduce reporting for other derivative instruments as and when market participants start actively using these instruments. Going forward, the reported OTC derivative transactions will be used for strengthening Reserve Bank of India's conduct of surveillance of OTC derivative markets, financial stability assessments and, micro-prudential supervision of banks and PDs apart from disseminating the price and volume information (anonymised) for enhancing transparency of the Indian OTC derivative markets.

V.IV.II *Standardisation*

37. Gandhi Working Group has recommended that IRS contracts should be standardized and Swap Execution Facility (SEF) may be introduced for IRS trades. Against the backdrop of G-20 commitment and in order to improve tradability and facilitate migration of IRS contracts to centralized clearing and settlement in future, it has been decided to standardise inter –bank IRS contracts. The IRS contracts shall be standardized in terms of minimum notional principal amount, tenors, trading hours, settlement calculations etc. which will be prescribed by FIMMDA in consultation with the market participants. To begin with, standardisation has been made mandatory for Rupee Overnight Index Swap (OIS) contracts from April 1, 2013 and will be extended to other benchmarks in due course. Forex derivatives are currently non-standardised as they are primarily driven by customised client needs. With regard to CDS, the product is standardised since inception. It has been decided that the option of CCP for settlement could be examined once volumes improve and reach critical mass.

V.IV.III *Swap Execution Facility*

38. With regard to introduction of SEF, a trading system for IRS is expected to be operational in the second half of 2014. A related issue is whether these derivative trades can be moved to exchanges. The SEF cannot be compared to exchanges as they are mainly accessed by institutional investors (including dealers-brokers) for trading in specialized products and in large amounts. It is essential to maintain the distinction between exchanges and SEF because exchanges are meant to provide access to retail investors whereas SEFs are for institutional investors who access the market to provide liquidity and/or manage their balance sheets. Exchange traded IRS may not cater to the needs of institutional traders who trade in large lots. The long tenor contracts and management of cash-flows for extended periods of time (e.g. 5, 10, 20 years) are uncommon in exchange traded instruments which are possible in OTC trades (e.g., OIS up to 5 year tenor are very active in Indian market). Hence, globally attempts at trading of IRS on exchanges met with little success. For instance, exchange trading of interest rate swaps launched on the Chicago Mercantile Exchange (CME) witnessed minuscule trading volumes. Further, validity of OTC derivatives under Indian laws necessitates that one of the counterparties to the transaction has to be a Reserve Bank of India regulated entity. It is extremely difficult to ensure this condition in an exchange-traded environment.

V.IV.IV Migration to Central Clearing/CCPs

39. Globally broad objective for regulatory reform is that OTC derivative products have to migrate to central clearing. Only products meeting certain conditions, such as, standardisation; relative lack of complexity in contract terms; sufficient market liquidity; and readily available pricing information can migrate to central clearing. Regulators are exploring the possibility of mandating the migration to central clearing and /or incentivising. For example Basel III capital rules create an incentive to move to central clearing because exposures to a CCP will generally attract a lower capital charge than other bilateral exposures.

40. A large number of legal/operational issues, such as, inter-operability across different CCPs, legal complexity, regulatory uncertainties, applicability of insolvency regimes, default management processes of CCPs and potential increase in collateral requirements are engaging regulators' attention.

41. In India, guaranteed clearing exists for USD/INR forward transactions. Rupee IRS and Forward Rate Agreements (FRA), which form the bulk of interest rate derivative transactions, are currently being centrally cleared in a non-guaranteed mode. An "in principle" decision to bring IRS and FRA transactions in the Indian rupee within the ambit of guaranteed settlement has been taken. Though, it is not mandatory for market participants to clear their trades through CCIL, more than 90 per cent of IRS trades are cleared through CCIL's non-guaranteed settlement system. Therefore moving IRS to central clearing is expected to be smooth.

42. Recently, Reserve Bank has issued guidelines on capital requirements for bank exposures to central counterparties. The guidelines prescribe the capital requirements for banks' exposure to qualified CCPs (QCCPs) and non-qualified CCPs. One of the significant aspects in the guidelines is that it has been proposed to treat the exposures to the Clearing Corporation of India Ltd (CCIL) on net basis. In cases, where the CCIL provides guaranteed settlement, banks may reckon their total replacement cost (MTM) on net basis, i.e., on net replacement cost as part of trade exposure determination. This would provide significant capital relief to banks.

43. In this context, an issue that is receiving close attention of policy makers is increase in concentration risks of the CCPs. It is imperative that the risk management system of the CCP is very robust and compliant with best global standards. In India, it has been our endeavour to benchmark our institutions and practices with international standards. In pursuit of this objective, the CCP in India (viz. CCIL) has been evaluated for governance and risk management by domestic and international assessors. Further, Financial Sector Assessment Programme (FSAP) has also evaluated the CCP and found the system to be robust. The CCP has also done a self-assessment of "Principles for Financial Market Infrastructures" (PFMI) published by CPSS-IOSCO. The self-assessment is being evaluated by us. It is essential that periodic assessments may be conducted in view of importance of these institutions for systemic stability.

V.IV.V *Margining*

44. G-20 leaders have added margin requirements for non-centrally cleared derivatives as a reform measure in 2011 and advised BCBS and IOSCO to develop consistent global standards for these margin requirements. These margin requirements have been finalised and would be implemented. There are, however, concerns that the greater collateralisation of transactions may, in turn, lead to new credit and liquidity risks which would have systemic implications, such as, increased asset encumbrances and possible shortage of safe assets. The regulators are deliberating on these issues. In case of IRS in Indian derivatives market, margins are not posted as per market practice. This practice engenders elevated counterparty risks and systemic risks. Reserve Bank would shortly initiate steps to mandate margin requirements for IRS. This would make IRS regulation consistent with CDS regulation which mandates margin posting. The mandatory requirements would, however, be introduced after consultations with market participants and implemented in phased manner.

V.IV.VI *Bilateral netting*

45. The imposition of margins brings us to the issue of bilateral netting with regard to margins posted for derivatives trades and netting of Mark-to-Market (MTM) positions for capital adequacy purpose. While it is universally accepted that close-out netting improves financial market efficiency, legal provisions regarding enforcement of netting arrangements differ across jurisdictions. For close-out netting to work, it needs to be legally enforceable in the jurisdiction in which the defaulting party is incorporated. Reserve Bank is examining the issue and would explore all the possible options including changing the legal framework to resolve the issue.

V.V *Extraterritorial application of laws and harmonization of global regulatory efforts*

46. Laws like Dodd Frank Act, EMIR, etc. enacted in the wake of financial crisis have certain provisions that have extraterritorial implications on foreign jurisdictions as they impose registration/recognition, reporting requirements, etc. with potential to increase complexity, introduce uncertainty through overlapping and conflicting rules and impose large costs on global OTC derivatives markets. Such provisions have implications for regulatory independence and authority of other countries and have raised concerns regarding the primacy of home country regulators. Though there is recognition of substituted compliance, there is lack of clarity on the implementation of such regime. Convergence of regulatory standards prescribed by G-20 and those of the US, Europe & other advanced countries is required so as to limit regulatory arbitrage and at the same time impose lesser cost on the market participants. Regulatory reform initiatives through a globally agreed mechanism of substituted compliance could address such regulatory arbitrage more effectively than extraterritorial legislation. Substituted compliance assessment should be based on the individual jurisdiction's compliance with applicable global standards set by international standard-setting bodies like the CPSS, IOSCO and the BCBS. As responsible member of committee of supervisors, Reserve Bank along with Government of India and other regulators, such as, SEBI and the Indian CCPs have been constantly engaging with regulators in developed and emerging markets to resolve these issues.

V.VI *Regulator-market body interactions & consultations*

47. The relation between the regulator and the regulated market participants is very important as both need to work towards the same goal, i.e., safe and sound financial market for economic development. Hence, it is imperative that there should be effective communication between them. Such communication would aid regulation as the intent of regulatory action and incentives that should guide market behaviour must be clearly understood by the market so that the actions can be suitably modified. In addition to the communication which generally happens through official channels, Reserve Bank undertakes structured interactions to put forth its point of view and elicit market participants' response. For example, pre-monetary policy meetings, bi-monthly meetings with FIMMDA and monthly meetings with PDAI provide opportunity for such interactions. All of us have gained a lot of insights from such meetings. The consultations between Reserve Bank and the FIMMDA on various issues of policy have not only helped us in understanding the point of view of the participants but have also led to giving greater responsibility on FIMMDA as a market body.

48. Today, apart from coming out with price valuations for G-Sec and non-G-Sec securities such as corporate bonds, FIMMDA has been given added responsibilities such as accrediting brokers in the OTC interest rate derivatives market, publishing daily CDS curve for valuation of open position, constitution and working of the Determination Committee, etc. FIMMDA has played a pivotal role in several other areas, such as, documentation of CDS, repos, commercial paper (CP) and certificates of deposit (CDs), and codifying market practices through "Handbook of Market Practices". FIMMDA has been proactive and started review of the efficacy of benchmarks like MIBOR in wake of the LIBOR controversy. Likewise, PDAI has also been playing a very important role in making our G-Sec market more liquid and in the successful completion of the Government's market borrowing programme every year. The activities of FIMMDA and its role in the underlying market clearly indicate its important self-regulatory role in the concerned markets. In line with, the Committee on Financial Benchmarks recommendations on governance, I would like to urge FIMMDA to strengthen their technological and administrative capabilities to discharge the challenging responsibilities. I would also urge FIMMDA and PDAI to continuously engage with the regulator in a proactive manner drawing upon intensive consultations with their members, other important stakeholders (e.g., the IBA, corporates, retail investors) and cross-country developments and make constructive suggestions for improvement of the markets. I would also appreciate the concerns of regulators and communicate to their members appropriately.

49. In addition to regular interactions with market bodies, Reserve Bank has consistently followed a consultative process while framing guidelines. Draft regulations are placed on the Reserve Bank's website for public comments; and expertise of market participants is regularly sourced by making them members in various committees appointed by the Reserve Bank to examine issues relating to market development and regulation. Markets are dynamic and evolutionary and call for continuous improvisations. Here I would like to highlight that one cannot wait to design a perfect product, as the waiting may be endless. While it is reasonable that the participants' view primarily emanate from their own 'book' (their positions, their experience, etc.), it is expected that

the suggestions would also be given from the macro perspectives leveraging on the experience. Further feedback/suggestions are required not only from participants whose immediate interests are affected but also from all players including the India Banks Association (IBA) who have a stake in the improvisation of the system.

VI. Concluding Thoughts

50. Deep and liquid debt and derivatives markets are essential to ensure a robust and efficient financial system which aids economic development. In India, there exists a very large Government securities market, which needs to be regulated efficiently & effectively to ensure financial stability. The need for such regulation has been underscored by the global financial crisis. Regulation may act as a guiding force in such times by prescribing appropriate rules, or by creating incentives for appropriate behaviour. We in India were reasonably insulated from the global financial crisis, but have been facing challenges. Our regulatory approach has been cautious and calibrated with focus on financial stability and market development. Reforms in the G-Sec market carried out since the early '90s have ensured that the market is a well-organized and appropriately regulated with world class market infrastructure for trading and settlement. Our endeavour has been to promote market transparency, financial soundness of institutions by prudential regulation and orderly market conduct. FIMMDA and PDAI have been playing a pivotal role in such endeavours by providing valuable support and inputs. Our approach to regulation has been appreciated globally and the Reserve Bank of India was awarded the 2012 Dufrenoy Prize for its approach to the regulation of derivatives market, thus facilitating financial innovation in a responsible manner. The global financial reform initiatives have become more onerous. The G-20 reform agenda, which we have committed to implement has significant implications for domestic markets. The proposals to shift OTC derivatives to trading platforms, creation of trade repositories, migration to central clearing and, mandated margining regime will change the business models and market practices. Issues relating to market integrity (e.g. fixing of benchmarks like MIBOR) and, accounting dispensations (e.g. requirement of HTM) need to be resolved in non-disruptive manner.

51. To conclude, no country can be an "island" and we need to comply with international best practices in regulation. We will adopt the regulations in a calibrated manner keeping in view domestic circumstances and market dynamics. The markets should, however, be prepared for the transition. This would not only help financial sector but also the real sector. Market bodies like FIMMDA and PDAI alongwith the IBA have to play a more active and collaborative role with the regulators to take this process forward. I wish the conference great success. I also wish the conference participants all the best for exciting business with serious fun.